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NEWS RELEASE

EPA Study Receives Best Paper Award from Society of Toxicology

Research Triangle Park, NC...A paper by Dr. Urmila Kodavanti, a scientist at the U.S. Environmental Protection Agency, and co-authors has been selected to receive the Society of Toxicology's Best Paper Award in Toxicological Sciences. Kodavanti will accept the award on behalf of all authors at a ceremony March 21 at the society's annual conference in Baltimore, MD. The paper, published in *Toxicological Sciences* in 2003, found that heart injury occurred in animals exposed to small particles known as particulate matter during regular intervals over long periods of time.

The study, conducted in collaboration with Harvard University School of Public Health and the National Institute of Environmental Health Sciences, sheds light on how air pollutants may cause illness or death from heart disease and is part of a major research initiative by the EPA to better understand the health effects from particulate matter on susceptible populations such as the elderly and young.

The metal composition of combustion particles used in the study resembled those collected outside in polluted areas. Also, the calculated average daily exposure of particulate matter over the study period was comparable to exposures associated with highly polluted urban environments. Animals prone to heart disease in the study showed heart muscle inflammation, degeneration and scarring when exposed to particulate matter, but no changes when exposed to filtered air. Metals have been suggested as a cause of observed cardiovascular effects in humans from air pollution. Because zinc was the predominant metal in these particles, this study suggests that particle-associated zinc may play a role in heart muscle damage. Additional research is under way to provide further information about the possible health effects of breathing particles containing metals.

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